A LATE LOOK AT SOME HAWAIIAN TREE SNAILS*

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In the past 200 years, the endemic tree snail subfamily Achatinellinae probably got more attention from scientists and laymen combined than any similarly evolved group of Hawaiian organisms. The varied shell decor of its some 100 full species inspired generations of collectors to comb its range, from its Maui-nui metropolis to its O'ahu and Hawai'i peripheries.

Many 100,000's of Achatinellinae shells repose in collections, and literature on the group abounds with plates of the shells. To a lesser extent, their soft anatomy is also preserved and illustrated--typically with drawings of dissected specimens. Until recently, pictures of the whole, living animals were wanting.

As part of the record of a six-year field survey of Achatinellinae's status in the 1970's by Alan D. Hart, I took several thousand color photographs of living snails he found in its four genera (Newcombia, Perdicella, Partulina, Achatinella). This first representative photographic record of the group alive may be the last, though. Populations have shrunk rapidly in the past 20 years; half the O'ahu species and all the Hawai'i species may now be extinct--many recently.

With his field data, Hart petitioned the U. S. Department of the Interior to declare endangered all extant remnants of the O'ahu genus Achatinella. Perhaps that will stimulate research on the little-known biology and ecology of the subfamily.

Biogeographers cite Achatinellinae as a rich example of insular evolution, but taxonomists find them difficult. After two centuries spent accumulating and studying preserved specimens, we still cannot explain with conviction their genesis and descent. By switching our focus to the live animals, we may yet learn how they evolved--but the time is late.

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* Abstract